REMARKS

Claims 1-7 are presently pending in the application. In view of the arguments for patentability set forth below, Applicants respectfully submit that this application is now in condition for allowance.

Claim Rejections – 35 U.S.C. §103(e)

Claim 1 stands rejected under Section 103(a) as being unpatentable over Thompson et al. U.S. Patent No. 6,282,005 ("Thompson"). Applicants respectfully traverse this rejection and submit that Thompson fails to teach or suggest the claimed invention.

As previously argued, in accordance with an aspect of the present invention, *multiple RF blocks* are combined into a composite signal and frequency-division multiplexed *onto each wavelength band* of a WDM optical system. As described, for example, in the specification:

> Fig. 3a shows a diagram of the system concept. At central office transmitter 305, the output of a broadband ASE source 306, for example, a gain-flattened Erbium-Doped Fiber Amplifier (EDFA) not shown, is sliced into multiple optical bands whose width matches the FSR of the distribution WGR at a Remote Node (RN) 310 (four bands are shown in the exemplary embodiment). Central office transmitter 305 is coupled to the remote node 310 in the exemplary embodiment via feeder fiber 315. Each spectral band is modulated with multiple blocks of RF subcarriers. In the case of the system demonstration for the present invention, four RF blocks were derived from a commercial satellite antenna. Each RF block of 500 MHz contained greater than 80 digital video channels multiplexed into 16 QPSK carriers in the 950-1450 MHz band. After block-conversion into blocks between 50-550, 550-1050, 1050-1550 and 1550-2050 MHz, *these RF bands were combined externally to modulate each of the four optical bands.* Consequently, the re-multiplexed optical signal in the feeder fiber contained the entire service matrix shown in the inset to Fig. 3a: each square box represents a 500 MHz block of the commercial service.

Specification at pp. 6 – 7, ¶28 (emphasis added).

In this regard, independent claim 1 calls for a method for delivering a plurality of video blocks to a user terminal serviced by a remote node comprising the steps of:

> receiving, by a first WDM, a broadband signal from a broadband signal source;
>
> separating, by said first WDM, said broadband signal into a plurality of optical bands;
>
> *modulating each of the plurality of optical bands with a composite signal representing data in a plurality of independent RF blocks to form a plurality of modulated signals*;
>
> forwarding said plurality of modulated signals to a second WDM to form a combined broadcast signal;
>
> transmitting said combined broadcast signal over feeder fiber to a remote node;
>
> further transmitting said combined broadcast signal over distribution fiber to a user's site; and
>
> selecting a RF block for distribution over a distribution fiber to a satellite set-top box at a user's site.

Claim 1 (emphasis added).

The Examiner contends that Fig. 4 of Thomson discloses all of the limitations of Claim 1 except in that:

> Figure 4 of Thompson differs from claim 1 of the present invention in that Figure 4 does not specifically disclose modulating each of the plurality of optical bands with a composite signal representing data in a plurality of independent RF blocks. However, Figure 5 of Thompson shown [sic] for modulating each of the plurality of optical bands *with a composite signal representing data in a plurality of independent RF blocks.*

See Office Action at page 3 (emphasis added).

Applicant respectfully disagrees with the Examiner's assertion above. With specific reference to Fig. 5 of Thompson:

> The optical carriers are combined in the multiplexed [sic] 132 to form an unmodulated WDM optical information signal. The

> individual carriers of the unmodulated WDM optical information signal are modulated in turn with information 1-N by a plurality of SPW modulators 136, 138...140 cascaded in series.

Col. 11, lines 56 – 61.

This structure does not meet the claim limitation of "modulating each of the plurality of optical bands ...." that have been previously "separated." In this regard, the embodiment of Fig. 5 does not separate the optical signals as called for by the claim. This expedient combines the optical signals into a multiplexed signal prior to modulation. Thus, the Examiner's combination of two embodiments that operate in completely different ways is misplaced.

Furthermore, Fig. 5 depicts *single blocks* of RF information (e.g., RF INFORMATION 1, RF INFORMATION 2 . . . RF INFORMATION N) that respectively modulate *each carrier*.

By way of contrast, as called for in claim 1 *each optical band* is modulated with *a composite signal representing data in a plurality of independent RF blocks to form a plurality of modulated signals*. Thompson fails to teach or suggest modulating *each optical band with a composite signal representing data in a plurality of independent RF blocks*. Accordingly, Applicants respectfully submit that this rejection is improper and that independent claim 1 is patentable over Thompson.

Claims 2-6 stand rejected under Section 103(a) as being unpatentable over Thompson in view of Lam U.S. Patent No. 6,721,506 ("Lam"). Applicants hereby reiterate the above argument distinguishing Thompson from the claimed invention and further submit that Lam fails to remedy the deficiencies in the disclosure of Thompson.

As described in the Abstract, Lam discloses:

> A method and system deliver multiple-band broadcast services in a network such as a wavelength division multiplexed passive optical network. In the transmitter and/or receiver of such a system, filters are cascaded to stack data corresponding to different services within different free spectral frequency ranges of an optical transmission signal. Each filter is used to select a portion of a free

> spectral frequency range to be delivered to a user node. Each transmitter filter confines the output from spontaneous emission sources to a desired spectral region. The cascaded filters can also combine multiple spectra and/or separate combined broadcast spectrum. The method can also be used to partition the output from a broadband spectral source into different portions in the spectral domain.

Lam fails to disclose or suggest the claimed step of "modulating each of the plurality of optical bands with a composite signal representing data in a plurality of independent RF blocks to form a plurality of modulated signals." Accordingly, it is respectfully submitted that even if, assuming *arguendo*, these references would be properly combinable, Lam fails to remedy the deficiencies in the disclosure of Thompson, and that dependent claims 2 – 6 are patentable over the asserted combination of Thompson and Lam for at least the same reasons as claim 1 as set forth above.

Claim 7 stands rejected under Section 103(a) as being unpatentable over Thomson in view of Lam, and further in view of Lu et al. U.S. Patent No. 5,880,865 ("Lu"). Applicants hereby reiterate the above argument distinguishing Thomson and Lam from claims 2 – 6 and submit that the addition of Lu fails to remedy the deficiencies in the disclosures of Thomson and Lam.

In view of the foregoing, Applicants respectfully submit that claims 1-7 are patentable over the cited art and allowance of these claims at an early date is solicited.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. 1.16 or 1.17 to AT&T Corp. Account No. 01-2745. The Examiner is invited to contact the undersigned at (908) 707-1573 to discuss any matter concerning this application.

Respectfully submitted,
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By:

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